

Ruben Scardovelli

List of Publications by Year in descending order

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34
papers

5,445
citations

304743

22
h-index

501196

28
g-index

38
all docs

38
docs citations

38
times ranked

3184
citing authors

#	ARTICLE	IF	CITATIONS
1	DIRECT NUMERICAL SIMULATION OF FREE-SURFACE AND INTERFACIAL FLOW. Annual Review of Fluid Mechanics, 1999, 31, 567-603.	25.0	1,615
2	Modelling Merging and Fragmentation in Multiphase Flows with SURFER. Journal of Computational Physics, 1994, 113, 134-147.	3.8	893
3	Volume-of-Fluid Interface Tracking with Smoothed Surface Stress Methods for Three-Dimensional Flows. Journal of Computational Physics, 1999, 152, 423-456.	3.8	793
4	Physics and Engineering Design for Wendelstein VII-X. Fusion Science and Technology, 1990, 17, 148-168.	0.6	235
5	Analytical Relations Connecting Linear Interfaces and Volume Fractions in Rectangular Grids. Journal of Computational Physics, 2000, 164, 228-237.	3.8	217
6	Simulation of primary atomization with an octree adaptive mesh refinement and VOF method. International Journal of Multiphase Flow, 2009, 35, 550-565.	3.4	212
7	Interface reconstruction with least-square fit and split Eulerian-Lagrangian advection. International Journal for Numerical Methods in Fluids, 2003, 41, 251-274.	1.6	211
8	Interface reconstruction with least-squares fit and split advection in three-dimensional Cartesian geometry. Journal of Computational Physics, 2007, 225, 2301-2319.	3.8	200
9	A geometrical area-preserving Volume-of-Fluid advection method. Journal of Computational Physics, 2003, 192, 355-364.	3.8	122
10	A mixed markers and volume-of-fluid method for the reconstruction and advection of interfaces in two-phase and free-boundary flows. Journal of Computational Physics, 2003, 188, 611-639.	3.8	115
11	Multiscale simulation of atomization with small droplets represented by a Lagrangian point-particle model. International Journal of Multiphase Flow, 2015, 76, 122-143.	3.4	111
12	A surface marker algorithm coupled to an area-preserving marker redistribution method for three-dimensional interface tracking. Journal of Computational Physics, 2004, 197, 555-584.	3.8	72
13	Parallel simulation of multiphase flows using octree adaptivity and the volume-of-fluid method. Comptes Rendus - Mecanique, 2011, 339, 194-207.	2.1	66
14	A variational approach to the contact angle dynamics of spreading droplets. Computers and Fluids, 2009, 38, 406-424.	2.5	51
15	On the properties and limitations of the height function method in two-dimensional Cartesian geometry. Journal of Computational Physics, 2011, 230, 851-862.	3.8	43
16	A geometrical predictor-corrector advection scheme and its application to the volume fraction function. Journal of Computational Physics, 2009, 228, 406-419.	3.8	42
17	Instability growth rate of two-phase mixing layers from a linear eigenvalue problem and an initial-value problem. Physics of Fluids, 2010, 22, 092104.	4.0	32
18	A novel representation of the surface tension force for two-phase flow with reduced spurious currents. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 6239-6257.	6.6	30

#	ARTICLE	IF	CITATIONS
19	Computing curvature for volume of fluid methods using machine learning. Journal of Computational Physics, 2019, 377, 155-161.	3.8	30
20	Numerical, experimental, and theoretical investigation of bubble aggregation and deformation in magnetic fluids. Physical Review E, 2010, 82, 016302.	2.1	28
21	3D Large Scale Simulation of the High-Speed Liquid Jet Atomization. , 0, , .		27
22	Vofi â€” A library to initialize the volume fraction scalar field. Computer Physics Communications, 2016, 200, 291-299.	7.5	25
23	Simulation of axisymmetric jets with a finite element Navierâ€”Stokes solver and a multilevel VOF approach. Journal of Computational Physics, 2010, 229, 6853-6873.	3.8	23
24	Numerical integration of implicit functions for the initialization of the VOF function. Computers and Fluids, 2015, 113, 42-52.	2.5	23
25	An optimal constrained approach for divergence-free velocity interpolation and multilevel VOF method. Computers and Fluids, 2011, 47, 101-114.	2.5	13
26	A Quasi-Direct 3D Simulation of the Atomization of High-Speed Liquid Jets. , 2005, , 295.		7
27	Improving the Knowledge of High-Speed Liquid Jets Atomization by Using Quasi-Direct 3D Simulation. , 2005, , .		7
28	Interface tracking with dynamically-redistributed surface markers in unstructured quadrangular grids. Computers and Fluids, 2006, 35, 1332-1343.	2.5	7
29	A Marker-VOF Algorithm for Incompressible Flows With Interfaces. , 2002, , 905.		4
30	Height function based Volume of Fluid code for simulations of multiphase magnetic fluids. Computers and Fluids, 2015, 113, 112-118.	2.5	4
31	Biased Monte Carlo optimization: the basic approach. Reliability Engineering and System Safety, 2005, 87, 387-394.	8.9	3
32	Review of split and unsplit geometric advection algorithms. , 2013, , .		3
33	A FEM SOLVER COUPLED TO A MULTILEVEL VOF METHOD FOR SIMULATION OF AXISYMMETRIC JETS AND TO A FRONT-TRACKING METHOD FOR SIMULATION OF SPREADING DROPLETS. Atomization and Sprays, 2010, 20, 115-131.	0.8	2
34	Scaling and intermittency in two-dimensional turbulence. Meccanica, 1994, 29, 479-488.	2.0	0